

NRCS Soil Science Division International Activities in the Caribbean and Latin America

Thomas Reinsch & Michael Robotham

Soil Science Division

July 2016

- IYS – Honduras and Mexico
- Soil Taxonomy Mexico
- Central America and Haiti Inventory
- Latin America and Caribbean Soil Atlas
- IUSS Universal Soil Classification working group
- Global Soil Partnership



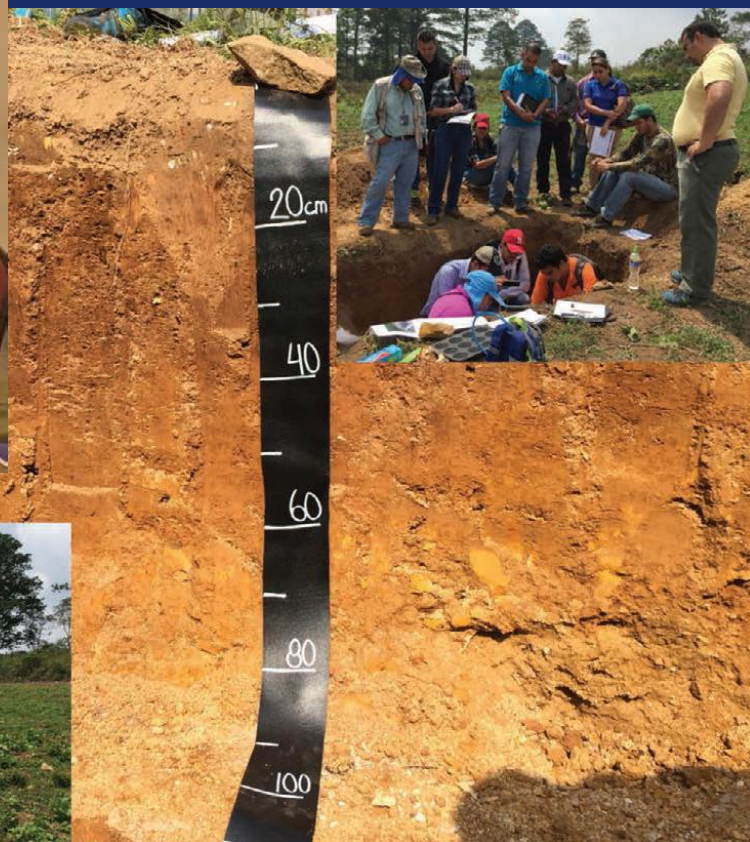
REUNIÓN INTERNACIONAL UNIVERSITARIA DE CIENCIAS DEL SUELO

Presente y futuro de las funciones del suelo

IX SEMINARIO – TALLER INTERNACIONAL DE CLASIFICACIÓN DE SUELOS



Central America Soil Mapping



Haiti Soil Initiative

- Cochran training 2013
- Field training and demo survey area 2014
- Cochran training 2016

ATLAS DE SUELOS DE
AMÉRICA LATINA
Y EL CARIBE

ATLAS DE SOLOS DA
AMÉRICA LATINA
E DO CARIBE

SOIL ATLAS OF
LATIN AMERICA
AND THE CARIBBEAN



http://eusoils.jrc.ec.europa.eu/library/Maps/LatinAmerica_Atlas/Index.html

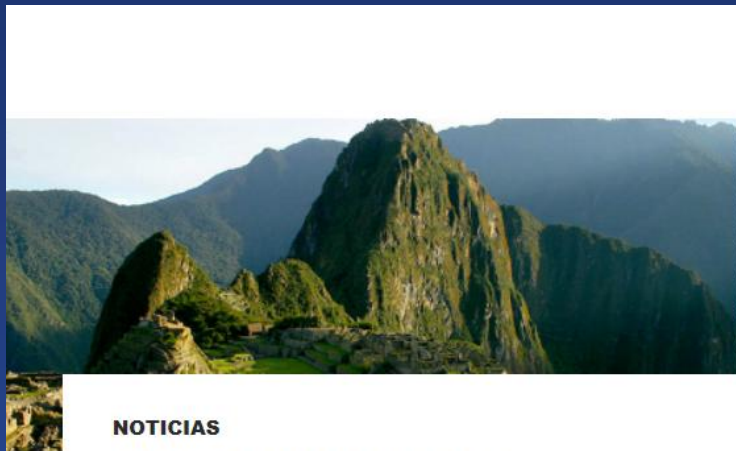
Atlas content – Examples

- Soils and the environment in LAC
- Soil classification
- Soil maps
- Soils and land use in LAC
- Soils and climate change in LAC
- Soils and large landscapes
- LAC soils: National perspectives



SOCIEDAD LATINOAMERICANA DE LA CIENCIA DEL SUELO

Fundada en 1954



NOTICIAS

XX CONGRESO
LATINOAMERICANO DE
CIENCIA DEL SUELO

CLACS
2009 Costa Rica
2012 Argentina
2014 Peru
2016 Ecuador

Universal Soil Classification IUSS Working Group



ELSEVIER

Universal Soil Classification System Report from the International Union of Soil Sciences Working Group

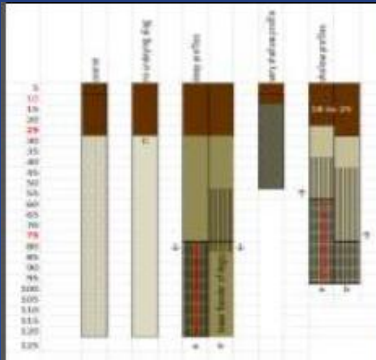
Jonathan Hempel,^{*} Erika Micheli, Phillip Owens, and Alex McBratney

Global pedodiversity, taxonomic distance, and the World Reference Base

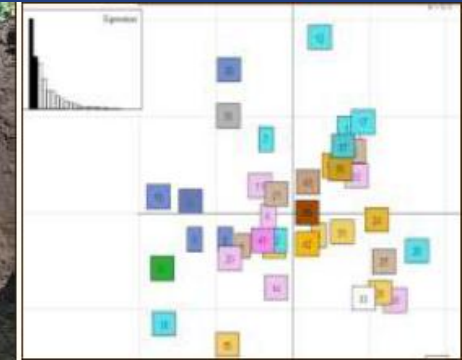
Budiman Minasny^a, Alex. B. McBratney^{a,*}, Alfred E. Hartemink^b

^a Faculty of Agriculture, Food & Natural Resources, The University of Sydney, NSW 2006, Australia

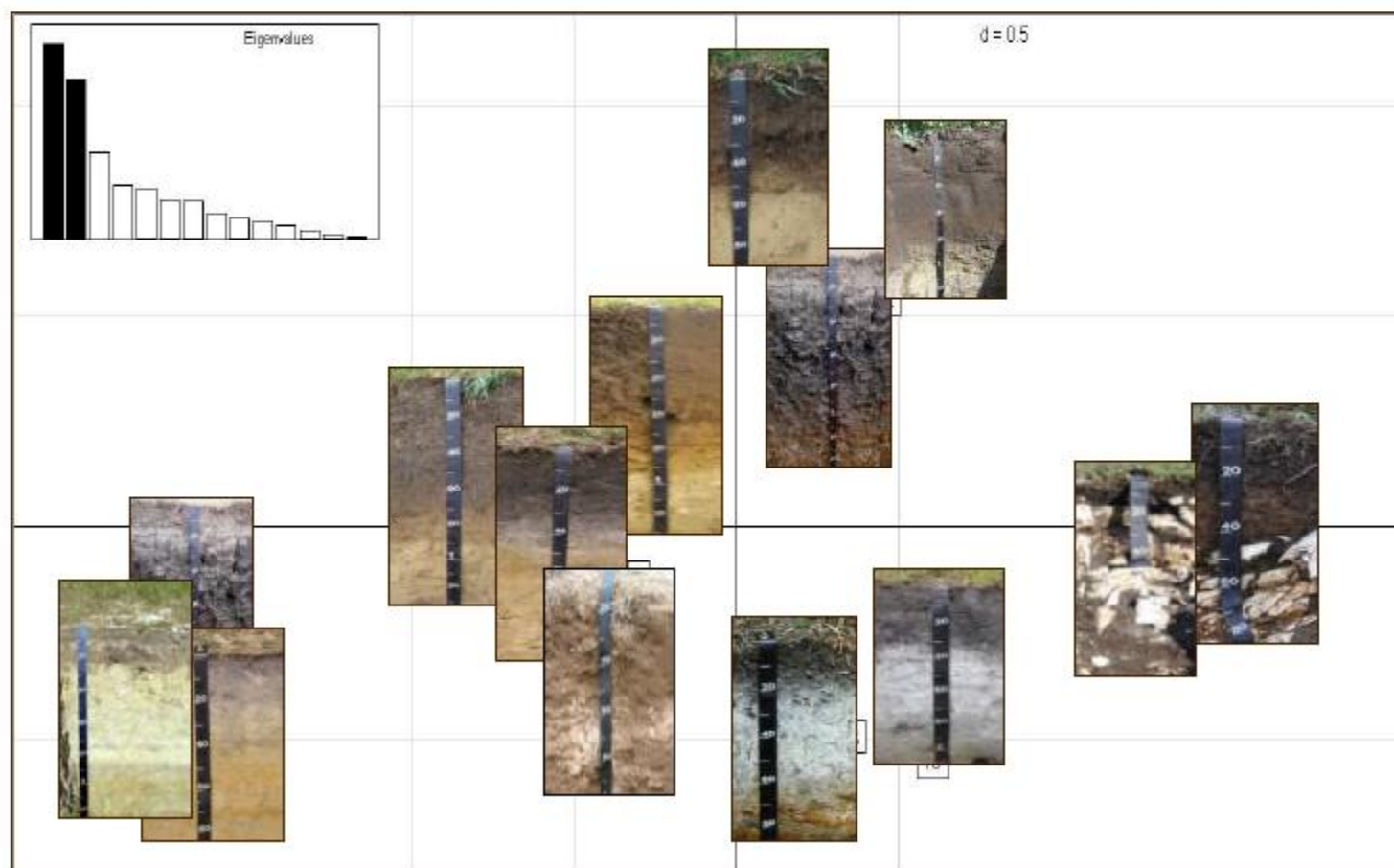
^b ISRIC – World Soil Information, P.O. Box 353, 6700 AJ Wageningen, The Netherlands

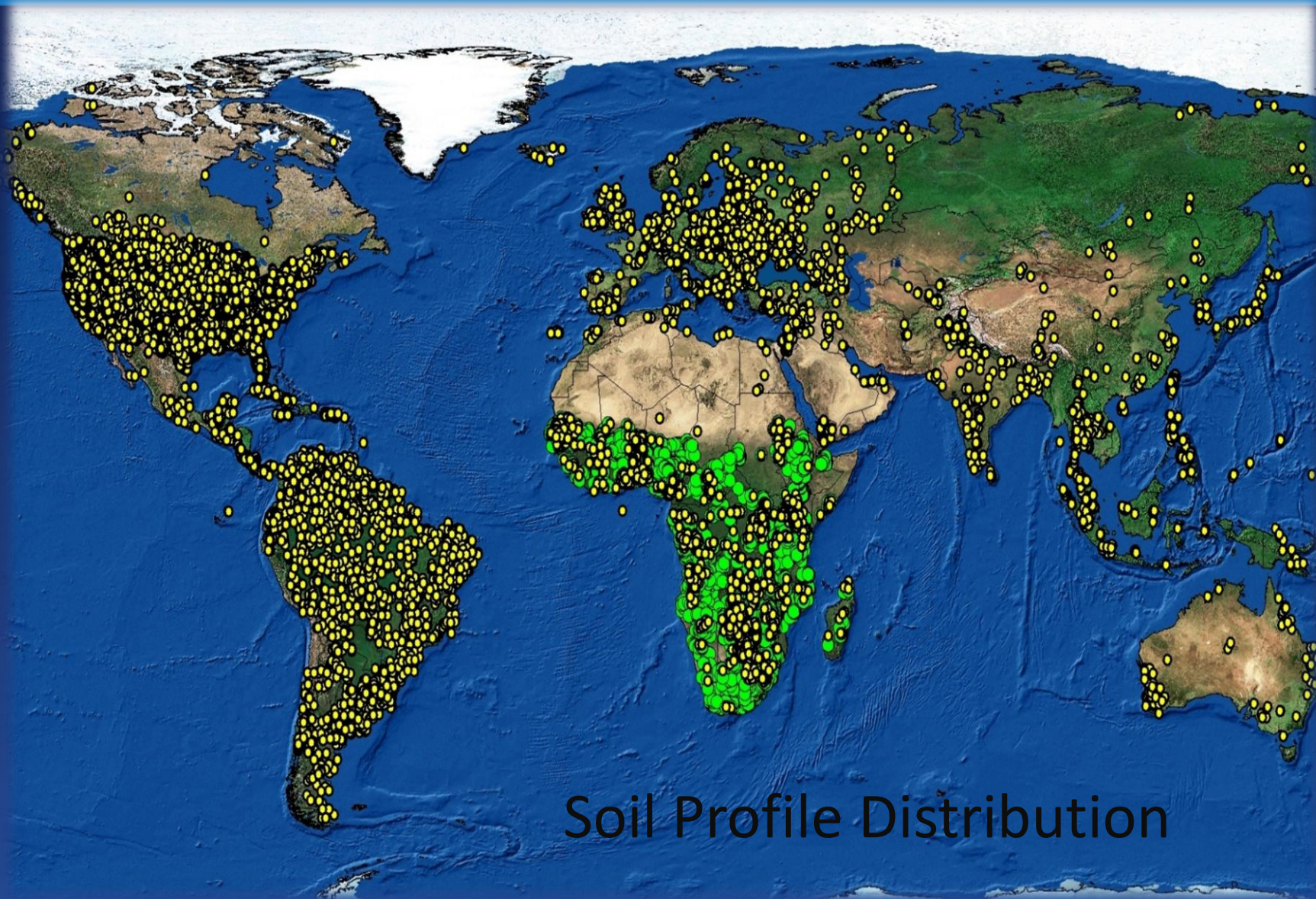


$$d_{ij} = ((x_i - x_j)^t S^{-1}(x_i - x_j))^{1/2}$$



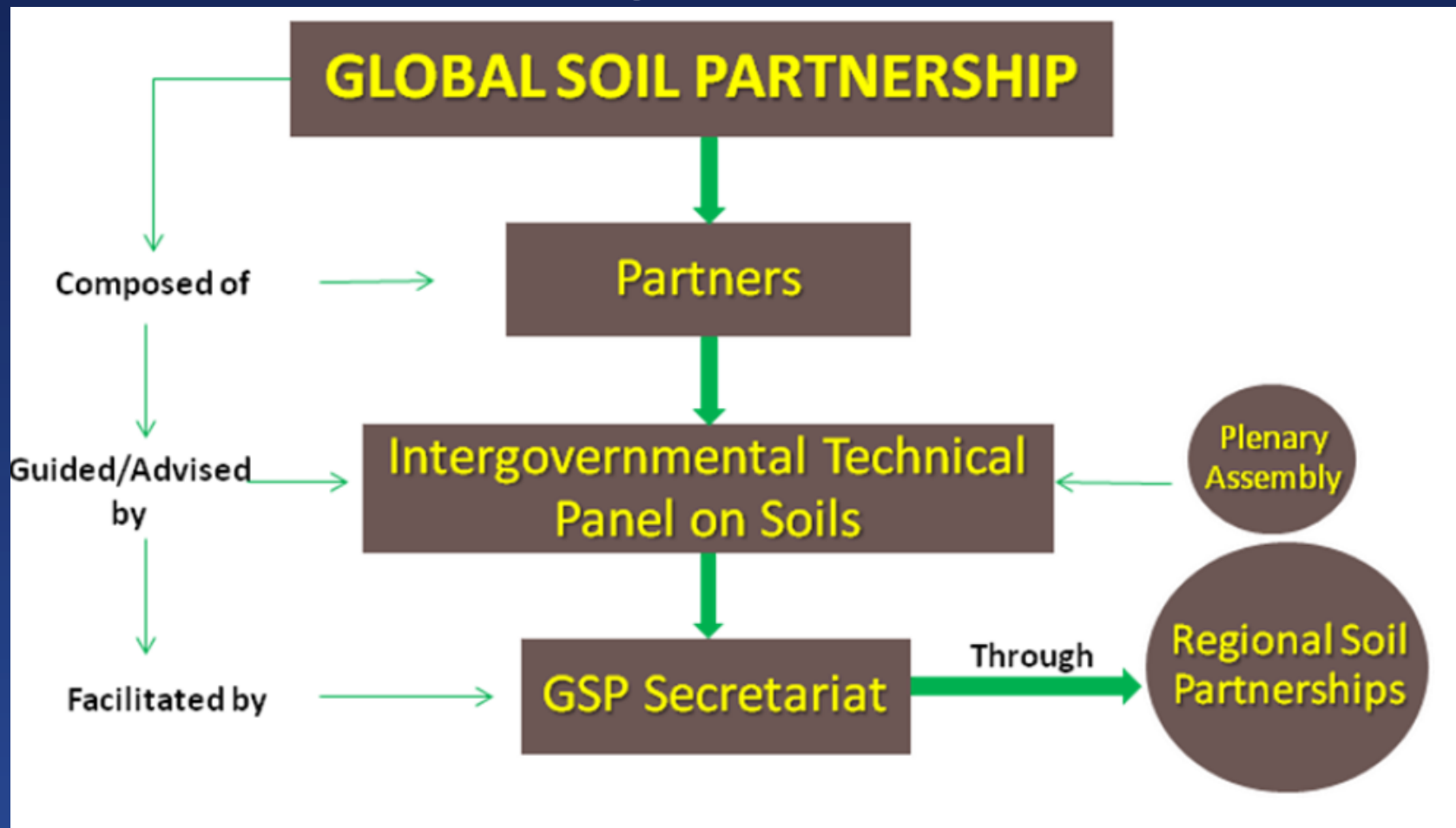
Taxonomic relationship studies based on distance calculations





Soil Profile Distribution

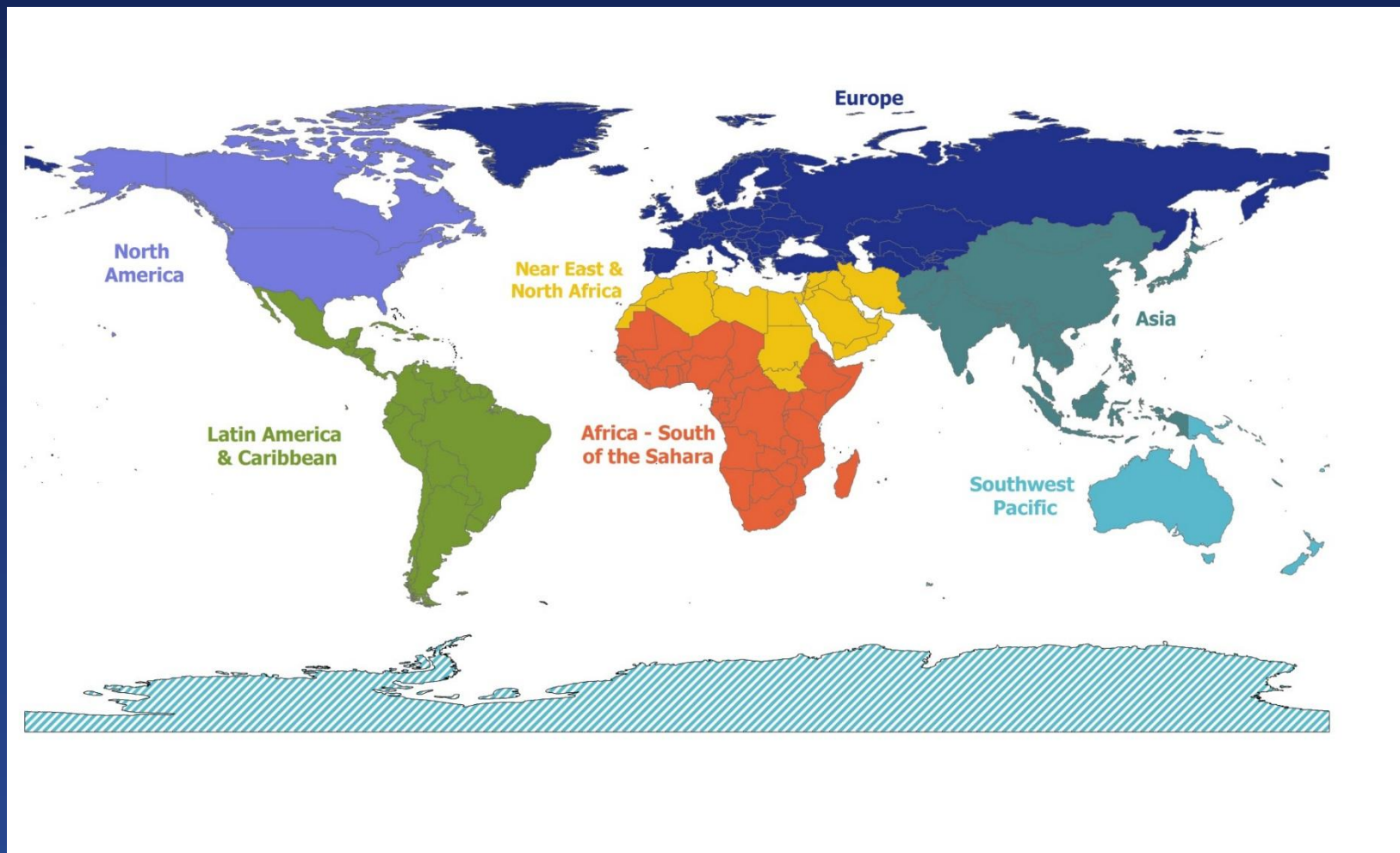
GSP – Working Structure



Key outputs:

- Establishment of the Intergovernmental Technical Panel on Soils
- Five Pillars of Action: Soil Management, Awareness Raising, Research, Information and Data, & Harmonization
- Submission of the proposal for a UN World Soil Day (5 December) and the International Year of Soils 2015
- Preparation of the revised World Soil Charter
- Production of the Status of the World's Soil Resources report
- Establishment of Regional Soil Partnerships
- Development of capacities in developing countries on digital soil mapping
- Development of Voluntary Guidelines for Sustainable Soil Management
- Establishment of national soil information systems

Regional Soil Partnerships - 7



South America Soil Partnership



The South American Soil facilitates linkages between local programs and active land management to strengthen ventures and develop sustainable soils of South America not only in the region but also play a key

role in food security, as the region is a major food exporter and the drought affects a large part of agricultural soils in South America.

Steering Committee

To achieve the goals of the partnership a Steering Committee was established with the following members:

- **Chair:** Carla Pasclae Medina (Argentina)
- **Other members:** María Julia Cabello (Argentina), Federico G. Fritz (Argentina), Adrian Andriulo (Argentina), Clarissa Nina (Brasil), Jhonny Oscar Cordero Núñez (Bolivia), German Amador Ruiz Cardenas (Chile), Diana Marcela Gomez Bonilla (Colombia), Soraya Alvarado (Ecuador), Miguel Angel Ken Moriya Roa (Paraguay), Oscar Roca (Peru), Mariana Hill Lavista (Uruguay), Jose Gregorio Alvarez (Venezuela).



LAC Partnership Inception Workshop at the Latin America Soil Congress



On 16-20 April 2012, on the occasion of the XIX Latin America Soil Congress, an inception workshop on soil information in Mar del Plata, Argentina was organized for establishing the initial Latin America Soil Partnership. 21 national soil institutions participated and presented their status in terms of soil information and soil activities as well as the needs and priorities that the regional partnership should focus on.

INTA, CIAT, EMBRAPA were the host of this meeting and they are leading the implementation of some regional soil activities. The Mar del Plata Communiqué was prepared by the participants in which they support the Global Soil Partnership and expressed that there is a strong interest in strengthening the soil institutions through capacity development and investing in sustainable soil management practices.

North America Regional Soil Partnership

- Composed of Canada and the US
- Led by the SSSA, SWCS and CSSS, support from a cast of others (i.e. NRCS and AAFC)
- Charles Rice, Gerald Miller, and Dan Pennock, are the respective liaisons.
- Membership in the Intergovernmental Technical Panel on Soils

Summary

- Build capacity to utilize Soil Taxonomy and other USDA soil science standards and technology to increase food security and sustainable land use.
- Promote soil conservation
- Establish permanent contacts with institutions and organizations responsible for soil conservation and soil survey in western Hemisphere

For additional information

Dr. Thomas Reinsch
National Leader – World Soil Resources
thomas.reinsch@wdc.usda.gov